

Must we continue to recreate the technology wheel in public health?

Dave Ross, Sc.D.

Executive Director

Center for Innovation in Health Information Systems



CENTER FOR
innovation
IN HEALTH
INFORMATION
SYSTEMS

My Comments Today

- **All Kids Count *Connections***
– a community of practice devoted to integrating early childhood programs and systems.
- **Towards a Software Institute**
for public health -- collaborative and shared development to build the next generation.





A National Program Office
supported by The Robert
Wood Johnson Foundation

- **AKC I**
1992 – 1997 Supported immunization
registry development
- **AKC II**
1998 – 2000 Supported limited
number of immunization
registries to reach fully
operational status

**Approach – funded large, multi-year grants
and build collaborative network of peers.**



CENTER FOR
innovation
IN **HEALTH**
INFORMATION
SYSTEMS

Conclusions of AKC I and II

A National Program Office
supported by The Robert
Wood Johnson Foundation



- Public health can
 - work effectively with private healthcare sector,
 - develop & implement sophisticated IT solutions,
 - develop standards-based approach.
- There is a bottom-line, measurable population health benefit from immunization registries
- Medicaid support for registries was possible because of national standards and performance metrics.

Conclusions of AKC I and II

A National Program Office
supported by The Robert
Wood Johnson Foundation



- Practitioners define value of registry differently than public health agency
- Public health was not a one-stop shop for important information. Public health could not provide a unified record of all important information.
- Categorical disintegration of services and information would need to stop.

AKC III

A National Technical
Assistance Center
supported by The Robert
Wood Johnson Foundation



Goal

- Articulate a vision for a more integrated system of services and systems that support the health and development of children.

Approach

- Facilitate a partnership of practitioners – state, local, private – to clarify elements of this vision and formulate principles that will help others reshape their approach to this problem.

Conceptual Framework: Optimize the child's developmental trajectory *

What we know:

- First 3 years critical for brain development
 - Experience shapes the brain's architecture, which shapes cognitive, emotional and social capabilities.
- Early childhood interventions work but many opportunities to intervene go unrecognized.

*At birth 1-2% born with disabling conditions
By 3rd grade, up to 17% in special education.*

*(Halfon, Hochstein, Inkelas, Shulman)

The case for integration

- Public health's contribution to a solution will be to integrate MCH and related early childhood programs.
- This will require re-engineering systems like:

EBC, newborn screening, EPSDT, immunizations, lead and asthma registries, etc.
- Result - integrated population information and a unified child public health record serving child, parent, practitioner, and public health.

Connections – The case for collaboration

Community of practice comprised of state / local health department and private healthcare projects that are integrating child health programs and information systems.

Members:

CalOptima, Maine, Michigan, Missouri, NYC, Oregon, RI, Utah, Wichita, Santa Clara County.

Connections Partners

CalOptima

- Medicaid MCO for Orange County, CA
- 270,000 member, 158,000 members under 21 years of age
- 7,000 covered births and 5,000 additional newborns whose mothers are not covered
- 11 contracted health networks, 1,100 primary care physicians - 370 private pediatric practice sites
- All pediatric preventive services paid FFS centrally by CalOptima
- CA CHDP (EPSDT) form used as claim form (“PM160”)
- 137,000 PM160s paid in 2001

Connections Partners

CalOptima Goals

- Disseminate knowledge for action – High Tech for High Touch
- Prompt to decrease missed opportunities and increase preventive service delivery
- Expose providers to electronic tracking systems.

Connections Partners

CalOptima

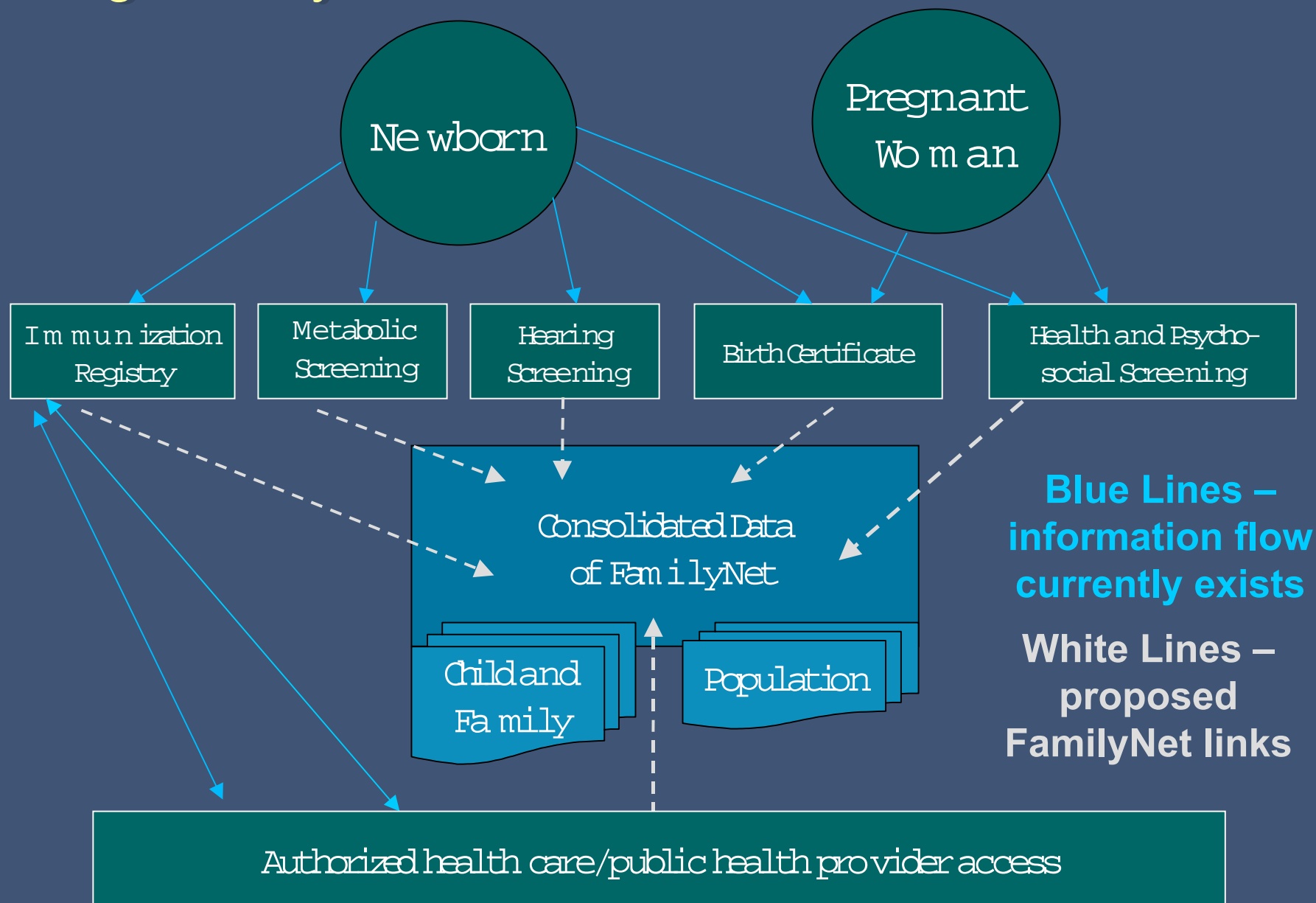
- Data warehouse with 500,000 records
- Assessment, screening and immunization histories
- HEDIS Rates:
 - Childhood Immunizations: 60%
 - Well-Infant Visits: 37%
 - Adolescent Well Visits: 40%

Connections Partners

Oregon Department of Human Services

- FamilyNet Data System
 - Coordinate family and child health services
 - Provide local access, real-time use
- Family and Child Module (FCM)
 - Identify and serve families
 - Integrate data for a child health profile
 - Use data to look at individual, program, and population outcomes.

Oregon Early Childhood Services – Information Flow



Connections Partners

Oregon Family Net – Stakeholder Concerns

- Concept needs clarity
- Skeptical of “no work” for docs
- Follow-up, implementation will be difficult
- Those who need it most won’t sign up
- Suspicious of government database
- Data confidentiality concerns
- Who will pay??

Connections Partners

Oregon Family Net – Stakeholder Benefits

- Family and child emphasis
- Early detection of key risk factors
- Help to populations in greatest need
- Data to support research and policy formulation
- Parents will see link between disease prevention, risk factor intervention, and education

Connections: The Importance of Collaboration

Connections partners

- Understand how their problems are common and draw clearer distinctions about where the differences lie.
- Learn from one another by sharing tacit knowledge about issues central to their work.
- Engage in joint activities that will codify a roadmap for others to consider and possibly use.

Do we need a new approach to information infrastructure?

- *Connections* projects demonstrate that a transformation is occurring from single purpose, single vision systems to larger system-wide repositories and more complex patient care systems.
- We believe that we must ask if the public health investment in new information systems can be done faster, cheaper, and better.

“Every system is
perfectly designed to
produce exactly the
results it produces.”

Dr. Don Berwick,

Institute for Healthcare Improvement

Problem: IT in public health is not designed to achieve the results we desire.

- The way public health informatics is practiced today inhibits the advancement of public health.
 - State-by-state, locality by locality, fragmented effort – limited funding, perception of unique requirements
 - Business processes not well-defined, lack of architectural and data standards
 - Driven by federal disease/problem-oriented funding initiatives
- There is no organization with the mission and expertise to bring everyone together.

Can/should public health software development be a shared activity?

Is there is an opportunity to consolidate PH information systems support across states?

- RWJ asked the Center for Innovation to conduct a study to determine whether this is feasible and if so, how to implement it.
- We have consulted with expert committees and interviewed a number of people across a variety of organizations.
- We find that there is an opportunity, but that it is large and requires a number of services.

Gathered Broad Perspective

- Thought leader collaborators
- Organizations interviewed:

CMS , HRSA, AHRQ,
CDC, ASTHO, NACCHO,
APHL, NAPHSIS, Public
Health Data Standards
Consortium, NAHDO,
AAP, AIRA

- State and Local Public Health Agencies
- Universities
- Private Vendors
- Private Consulting Firms
- Foundations

Based on our interviews:

- We discovered several very urgent application needs, e.g., bioterrorism preparedness, vital records, public health laboratories.
- Software sharing alone is not enough; need a constellation of activities.
- Component-based design would allow for easier exchange. We need to define business process in pieces, build in pieces, and in a standards-based manner.
- People see the value in partnering.

Recommendation

- Need for non-governmental, not-for-profit entity dedicated to serve the informatics needs of public health.
- Users want neutral party to facilitate sharing and collaboration but not to force an agenda.
- Support for
 - Requirements definition
 - Collaborating and convening
 - Shared application development cost
 - Sharing tools

Long term, the basic services might include.

- Training development
- Quality improvement
- Research
- Conferences
- Policy development
- Convening and collaboration
- Educational seminars (delivery)
- Environmental scanning
- Repository/clearinghouse
- Consumer report
- Evaluation and testing
- Legal/admin

Critical Success Factors

- Willingness of states to collaborate
- Credibility of a new Center/Institute to serve a neutral convening role
- Minimal bundle of services needed to create value
- Legal obstacles to collaborative procurement and/or development
- Support from vendor community

Challenges

- States often have special needs requiring customization, making it harder to standardize without a shift in their thinking.
- Entity will need to have people who are able to connect to and bridge to public health.
- Fragmentation of public health – state level and local level (may need small business administration services in addition to institutional services)

Next Steps

- Planning phase: 18-24 months
- Limited scope of activities
- Address urgent needs by prototyping key applications to test the concept
- Develop complete business plan

Questions / Comments

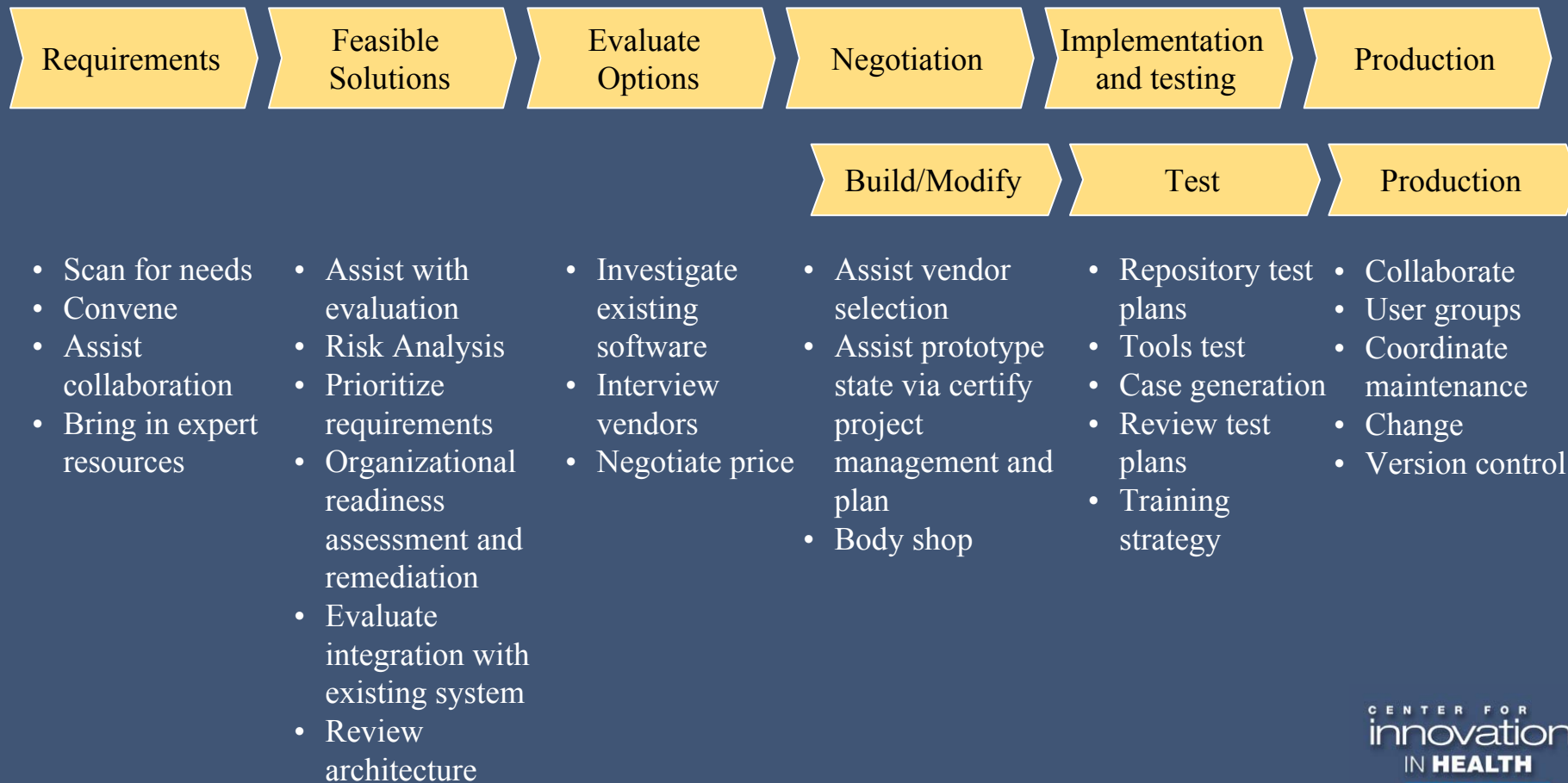
Dave Ross, Sc.D.

Executive Director

www.centerforinnovation.org

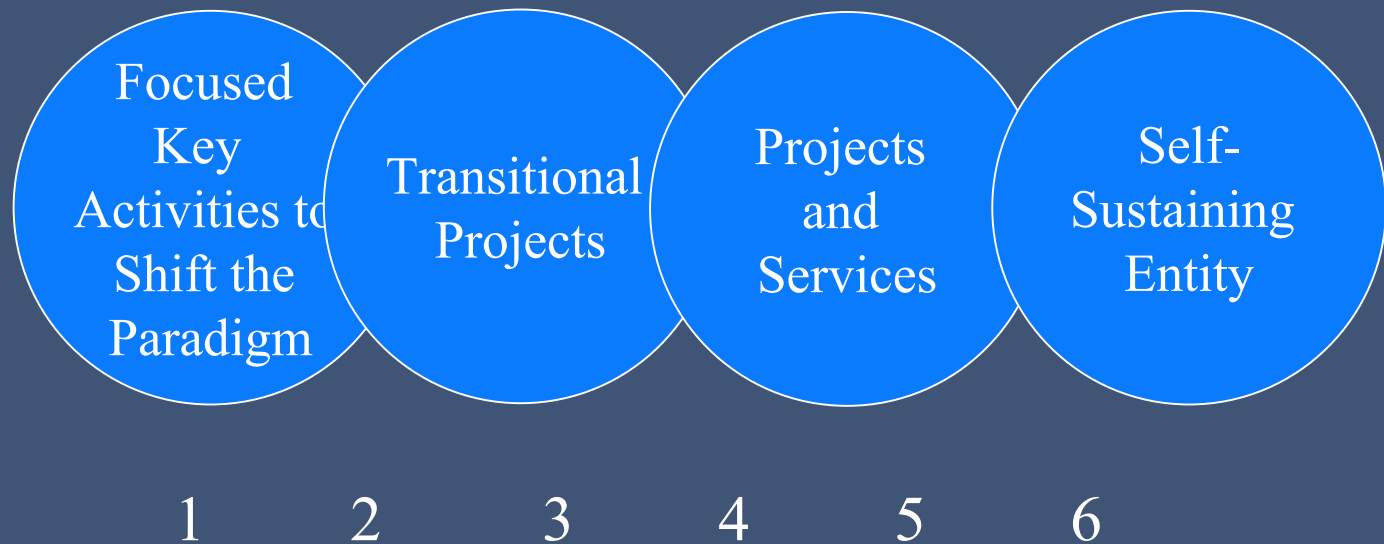
www.allkidscount.org

Services the entity would provide



Implementation Phasing

Promote the development of the field of PH Informatics



Transform the practice of PH through Informatics

Training and education

- Executive education – strategic use of IT, managing IT/decision making, resource allocation/expectations, trends in technology, leadership role, personnel management, software economics
- Project managers – curriculum development and certification, clearing house for courses
- Mid-senior program managers – use of IT, roles,
- Business analyst – IT experience who sits with program, provides customer requirements, communication bridge
- CIO Forum – Setting expectations, knowledge sharing, new roles,